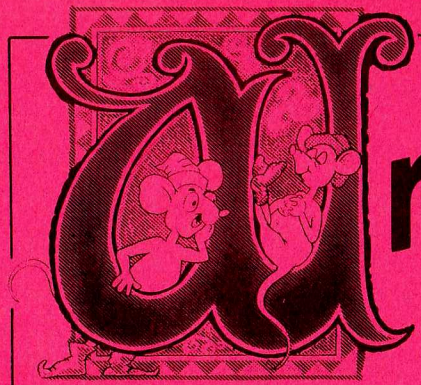
RMUSER Magazine

Volume 5:1

May 1990



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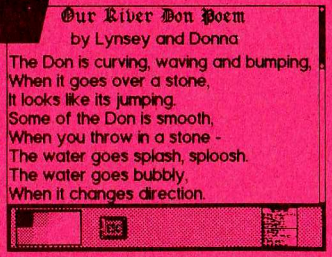
Our River Don Poem
by Lynsey and Donna
The Don is curving, waving and bumping,
When it goes over a stone,
It looks like its jumping.
Some of the Don is smooth,
When you throw in a stone -
The water goes splash, sploosh.
The water goes bubbly,
When it changes direction.

For more advanced users . . .

- Variable margins and tab stops
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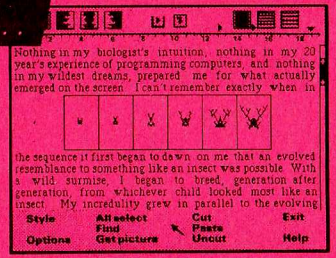
- Include page breaks and footers
- Easy-to-use foreign accents
- Short cuts with function or CTRL keys


Nothing in my biologist's intuition, nothing in my 20 year's experience of programming computers, and nothing in my wildest dreams, prepared me for what actually emerged on the screen. I can't remember exactly when in
the sequence it first began to dawn on me that an evolved resemblance to something like an insect was possible. With a wild surmise, I began to breed, generation after generation, from whichever child looked most like an insect. My incredulity grew in parallel to the evolving
Style
All select
Cut
Exit
Find
Paste
Options
Get picture
Uncut
Help

SPA

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HELP-LINE

The User Group contains a great body of expertise amongst its members and the help-line exists to act as a channel for spreading knowledge and especially answers to your problems.

Remember, your problems are also our problems!

If you are in difficulty, please feel free to **ring anybody on the Committee** (see inside back cover for numbers and note that Helen and John Williams have an ansering machine. If you're not sure who to phone then leave a message there and they will redirect it). We may not, individually, know the answers, but we hope that we may know someone who knows someone who.....!

Remember, the Group is on **TELECOM GOLD 83:JNL585**
Do feel free to write either to the Editor or the Secretary. This may be especially useful if the problem is complicated and non-urgent.

Advertising in the Magazine

Full- and half-page advertisements can be placed in the Magazine and details can be obtained from the Advertising Manager (address on Committee Page at back. We also take classified ads and members may place free ads for surplus kit in Micro-Mart, provided a valid membership number is quoted with the ad.

Rates

Back Cover: £75 Inside Cover: £60 Full Page: £50

Half-page: £30 Classified: £5 / 100 words

These rates assume black-on-white, camera-ready copy. Please avoid dot-matrix output. Typesetting is charged at cost and is additional to the above rates. Classified ads **must** be pre-paid, cheques for £5 payable to RM User Group.

The deadline for the next issue is **June 21st 1990**

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Editorial and News

Five years ago Robin Davies wrote "Editors come and go but Read Using goes on for ever". Well, it didn't ! Less than 2 years later the name changed from the obscure pun to a more sensible *RM User* and now it's time to say farewell and thanks to Robin as well. In his five years many changes took place to the magazine. I'm not going to make any prophetic comments about what will happen in the next few issues, let alone the next five years except to say that what happens depends largely on **you.** If you like what you see then tell others; if you don't then tell me - but please also say what you would like to see in its place.

I'd like to encourage you to contribute; Robin moved away from long machine code listings and I will continue with this (sadly; deep down I'm much happier with the 480z front panel than with any of these new fangled graphical user interfaces!). For those of us who work in schools the National Curriculum is firmly with us. Each document published so far has talked about the use of IT. I'd like to encourage you to write in with your thoughts and ideas about how you are going to put the broad outlines into practice. It always worries me that all over the country thousands of teachers are busy re-inventing the wheel. If you have done something which you feel other teachers would find of use then please let us know. I know that there are many projects running with a view to producing materials (my own school is involved in several) but these are very costly. I want to provide a low cost forum for sharing ideas.

There are many changes in RM products this month; the most welcome of which is a reduction in prices; check with sales desk to find out exactly what's changed.

At long last RM have announced some music systems with MIDI interfaces. The music turnkey systems have been specially designed to add a new dimension to music studies for more advanced pupils, and include microcomputer, music peripherals, interfaces and software - the core of a total system. (All you need to add is an amplifier, headphones and a MIDI instrument.)

These powerful systems can be used for composition, arranging, analysis, recording and playing back, editing, accompaniment, score printing (with a suitable printer), exploring tempo, volume, tones and sound effects, and for synthesis.

As a non-musician I'm not really suitable to judge the usefulness or quality of the systems but the description seems to include most of the things I've heard of!

RM Composer comprises an RM Nimbus PC-286 PC30 microcomputer with 1Mb of memory, a mouse and a colour monitor, plus a Roland CM32L Sound Generator (with a Roland MPU-IMC Midi interface) and a Ballade Midi Sequencer and Tone Editor. Price to educational users is just £2099. RM Composer Plus also offers the Copyist III Notation Printing Package, which will allow musical score printing from most printers from dot matrix to Postscript laser. Price £2399.

RM are continuing to support the primary sector with a special Primary Turnkey System which comprises an RM Nimbus PC-186 microcomputer with 1 Mb of memory, 20 Mb of hard disk, a colour monitor, a BBC parallel/user port and a mouse.

Ready configured on the hard disk is a range of software, including a friendly menu system, Microsoft Windows with Windows desktop utilities, RM Logo, BBC Basic, Art+Time animation software and - both created by SPA - PaintSpa drawing software and the WriteOn word processing package. Drawings from PaintSpa can be threaded together to form exciting animation sequences in Art+Time.

The special Primary School price is £1139, excluding carriage and VAT.

NET-SOFT

Most of you will know that Graham Townsend has configured a 300 megabyte VX Server, kindly loaned to us by Research Machines, specifically to show the range software available for RM Nimbus educational microcomputers. The software server is available at all RM User Group meetings. It can also be connected into an existing network at educational venues to allow staff to view the wide range of software that is available.

The aim is to provide a viewing platform for users to decide for themselves whether they wish to purchase a particular software. The service is operated independently of Research Machines and neither RM, nor the RM User Group, necessarily endorse software shown.

The software is linked into two menu systems - the RM Menu system and the Essex Driving system. Software currently available includes packages from the following companies:-

4Mation
Accutech
Akadimias
Appian Way
ATM
AUCBE
Aurora
AutoDesk
AutoGraphics
AVP
BIS
BECC
British Gas
British Petroleum
British Telecom
Cambridgeshire (CSH)
Camsoft
Careersoft
CDG (Scotland)
Clearsoft
COIC
Edhitec
Essex
Fernleaf
FG Projects
Flexible Software
FormatPC
Garland
Grafox
Griffin and George
Harrow School
Healthdata Database
Hutchinsons
ILECC
Information Education
Intext
IT Education
ITEM
ITMA
L'Ensouleiado
Lego
Linear Graphics + Plotter
LPA
Longman Logotron
LTS
Mercury
Merlin Associates
MGA
MicroGrafx
Microsat
Microsim
Morley + Teletext Adapter
Newman College
Nextbase
Northern Micromedia
October Pen
Oxfordshire CC
Peter Bishop
Pitmansoft
Primrose
QES
Question Mark
RBRC
RCEVH (Visually Handicapped Software)
Research Machines
Scetlander
Science Education Software
Shell
Sherston
SPA
SITU
Topologika
Tressell
UKAEA
Unisim
Whittle Systems
Wida
Widgit
Wirral CAE
Wolverhampton

If you are a user - or potential user - of RM Nimbus microcomputers or networks and are interested in viewing or displaying software on this server please contact: Graham Townsend, 3 Loseberry Road, Claygate, Surrey KT10 9DQ. Tel: 0372 66043 (Evenings)

MATHS WITH A MICRO

Three packs of material on using the microcomputer with SMP (School Mathematics Project) 11-16 will be shortly published by Cambridge University Press. The packs are:Maths with a Micro: Using Basic, Using Logo and Using Software. The packs range in price from £25 to £30 and free sample packs will also be available. The ideas look interesting on paper; they seem to encourage developing the use of existing resources and I like the idea of sample packs. Contact Cambridge University Press on 0223 325013 for further details.

Not long ago CD-ROM seemed to be a solution looking for a problem; my school has a Domesday machine and I feel that it was never as useful as the technology promised and I was afraid that CD-ROM would be the same. I hope I'm wrong! RM have recently announced new developments, including a dedicated server which allows high speed network access to the drives attached to the server. Another fascinating development is the Voyager CD-ROM Library from Next Technology. This is a juke-box CD-ROM system which can hold 90, 180 or 270 CD-ROM disks to be read by up to 8 readers. It has the capacity to access quickly up to 175 gigabytes of data - millions of text pages, images, data sets etc in a compact unit. Like a library, the disks and their information can be shared among groups of users. Contact Next Technology Corporation Ltd on 0223 420222 for more details.

Robin briefly mentioned *Word for Windows* last month. I've been trying out the "working model" which is available direct from Microsoft for £9.95 (0734 500741). Note that they are only able to supply it on high density discs and do not recommend it on anything less than a 286 machine with VGA graphics. I've been using it on a variety of machines and although it looks much better on a 286 than a 186 it is usable, even on a network. I'm told that when you include graphics in your work it slows down dramatically but this seems to happen on the 286 as well. The program does all the things you expect from Word but because it is running under Windows you can actually see font changes happen! One of my biggest problems with Word 3 has been setting tabs. If you are working in anything other than 10 pitch then the screen display is nothing like what comes out of the printer. *Word for Windows* gets round all this. It also makes setting up tables much easier; you simply specify the width of each column and it does the rest, including drawing borders if you want them.

The working model comes with virtually no documentation but it doesn't really need it. Pressing F1 at any time opens a new window in which you see help with whatever you're working on and the help is good. On screen you will see some text with dotted underlining and some with solid underlining. The dotted underlines show that there is a glossary definition for this word; click on it to find out what it means. The solid underlines show that there is more help on this. Clicking on this takes you to the relevant topic. At any time you can print a topic or copy it to the clipboard for insertion in another Windows application. This is one of the areas where the working model lacks the features of the full product; copying text through the clipboard loses almost all formatting and puts hard returns at the end of each line. I

presume that this won't happen with the full version. RM should now be able to tell you how to order it. There is an upgrade for existing network users at about £75 and I think it is probably worth getting. It is also being bundled with all new Net 3 servers. The network bundle now comes with a spreadsheet, word-processor, DTP package and several utilities all running under Windows. How long before there is a database included? I've read lots of good things about *Superbase.*

On the subject of Windows, by the time you read this Windows 3 should be available. Microsoft launch it on May 22 so RM should be shipping it soon. Those who've seen it say that it looks good. It addresses some of the security problems of Windows 2 on the network and is altogether much more attractive. I look forward to seeing it.

Net 3 is finally shipping in large numbers. In North Tyneside, where I work, several schools have upgraded and comments I hear are favourable. The only thing to bear in mind if you are thinking of upgrading is that it is not a five minute job. Amongst other things it involves re-formatting your winchester so make sure you've got a good backup! It does seem worthwhile to make the change. If you've upgraded then please write and let me know your opinions.

Finally, I've been experimenting with *Wincache* a program in Support Pack 1 (£9 from RM). Disc caching is a process which tries to speed up disc access by reading more data than you ask for whenever the disc is read in the hopes that you are going to want to read it fairly soon. It then stores the extra sectors in memory so that when you do ask for them they are available almost instantly. When you write to disc the data is stored in memory and then written away later on. If you have a program which frequently re-reads the same bits of code (*PageMaker* is an example) then you can speed things up dramatically. We use a careers program called *Microdoors* in school. Without *Wincache* loaded it takes about 10 minutes to load; with *Wincache* it takes 2 minutes. *Wincache* needs a 1.5Mb Nimbus PC186 and uses the extra 0.5Mb for the cache memory. It will not run with an external Cumana winchester using the Whittle Systems device drivers but there is a program called *Cache186* from Whittle (on 0865 736488) which will work.

Your new editor is Stephen Rochford; familiar to many as membership secretary for the past 3 years. He is Head of IT at a High School in North Tyneside and has been teaching IT for nearly 7 years (although he is a chemist by training). He has worked with 380z, 480z and Nimbus computers and spent 2 happy (?) years with one of the earliest Acorn Econets.

Letters to the Editor

Edgehill College
Northdown Road
Bideford
N Devon
EX39 3LY

Dear Mr Davies,

This is a small independent 11-18 girls school. We have been using RM Micros for ten years, mainly an 8 station 480z network, and are now starting to use stand-alone Nimbuses. We have started to build up software for these, including old favourites such as Oxfordshire Write, Quest, Smile Paintspa etc.

I am now projecting the purchase of six new micros. These will be stand-alones spread round the school for cross curricular use. Having read RM's glossy sales brochures, PC286's sound like a good idea - probably £200 more than PC186 but worth it to future proof the investment for the next 8 years or so.

However, I just have niggling doubts and wonder if you can clarify them. I understand that the PC286 is fully compatible but do not know about its Nimbus 186 emulation. Are we likely to have any problems using it in this way to run Nimbus software, particularly those noted above, or any of the other popular problems? If you could let me have your thoughts on this I would be most grateful.

Also, are there any problems with printer interfaces? Do these use a BBC type cable like the PC186 or shall we need PC style cables etc?

I intend to write to RM sales in due course but you may be able to give a more candid users view on any compatibility problems.

Yours sincerely

RK Hateley.

I'd welcome comments from other users on this issue of "backwards" compatibility. Some points are easy to answer:

1. You do need a different printer cable (so if you were thinking of sharing a printer between two machines then make sure that you have one of each type of cable; why didn't RM put a proper parallel port on the back of the original PC186. It would have saved a lot of grief over the years!)
2. Most Nimbus software will run unless it directly accesses the hardware; BBC Basic is an example of software that will not run but I understand that there is now a version available for the M-series and the X-series. Elsewhere in the magazine is an article by Graham Townsend (who looks after the Group's Network Server). He has written a large number of batch files which load the correct versions of software for the different machines, or simply put the machine into the correct mode.
3. Some software is very slow in RM mode. I often use Steed for quick editing jobs (editing batch files etc.) and find that it is very sluggish compared to the real Nimbus 186 machine. My Paintspa is almost unusably slow but there is a version available at usual low upgrade prices which works properly.

My own school is in a similar position; we are hoping to upgrade our computer provision and I am looking at PC286 machines. They certainly are much more powerful and do seem to be fully IBM compatible but are there any niggling little problems waiting? If any one wants to write and let me know I'd be glad to publish their thoughts (and swapping to my membership secretary's hat, I know that a lot of you bought 286 networks last year; how are you getting on with them?)

The following is a small part of a letter received from a member. The letter was also sent to RM for help; most of it concerns network security and I will not publish it here. If you have any queries regarding network security then do feel free to write to me; I will answer your letters personally but I will not print them in full in the magazine.

Why does NETMAN sometimes put a number at the end of the directory name (e.g. when creating a user MARK the directory is given the name MARK001)?
Is there anyway to invoke (X)NETDSK for simple disc tidying? Currently we copy a large, public file to the area and then exit, forcing NETDSK to run.

NETMAN will put a number at the end of the directory name when a directory of the same name already exists. This happened to me in the following way:

(i) I created a user MARK using NETMAN.

(ii) Later on I deleted the user MARK with NETMAN but didn't delete the directory (this is what normally happens; NETMAN *never* deletes files, even when you delete a user or group).

(iii) I recreated the user MARK in the same group. NETMAN finds a directory called MARK so won't reuse it but instead adds a sequence number. You can change the directory name that it suggests; it will warn you that there is already a directory of that name and ask if you want to use it.

When you log on or off the network and NETDSK runs, it checks an environment variable called DSKSPACE to see if the space you are allowed is less than that you have used. Typing SET at the DOS prompt will show you the current value for this. Create the following batch file in the public area called (say) TIDY.BAT

```
ECHO OFF
SET DS=%DSKSPACE%
SET DSKSPACE=0
NETDSK /SOFT
SET DSKSPACE=%DS%
SET DS=
```

What it does is to make a copy of the actual space allowance in the *environment variable* DS and then sets your allowed space to 0. NETDSK is then run (the /SOFT switch means that you can get out without deleting all your files!). When NETDSK exits the original space is restored and DS is deleted. In case you were wondering, you can do SET DSKSPACE=1000 to allow a megabyte but this only lasts until you log off. When you next log on the space allocation will be back as it was.

The following notes are from Peter Butt at City of London School.

Fletcher's Castle from Fernleaf runs under BBC Basic on the Network. Our Year 7 pupils like this program; they have to build a motte and bailey castle in 10 days.

The program seems robust, but after completing the castle, the option is given to have another go or end the session. On pressing E to end the following message is given: **REMOVE DISK CAREFULLY** and the staion seems to hang up, apparently requiring a CTRL ALT DEL.

The problem is the following section of code:

```
1920 PRINT ''''"A. Play again."''''"E. End the program's
use."
1930 IF FNc(22," A E"+"A"CLS:CLEAR:GOTO 530
1940 CLS
1950 PRINT '''''':FOR I=1 TO 2:PRINTTAB(2)CHR$141" REMOVE
DISK CAREFULLY":NEXT
1960 REPEAT UNTIL 0
```

Solution: delete line 1960 and replace line 1950 with

```
1950 *BYE
```

This will then return the user to the menu screen.
This kind of problem seems to be common in BBC programs which have been versioned for the Nimbus. On the BBC there is unlikely to be a menu to which the user should return so it makes sense to just stop but it is infuriating on a network. Strictly, you are infringing copyright when you make changes to a program in this way. What you should do is write to the program's author, informing them of the problem and asking them to put it right. Many software houses are keen to hear of problems with their software and will be helpful.

After composing some text using *Word* and wanting to save it in unformatted mode for (say) E-Mail purposes, how does one search for the end of line code and replace it with a carriage return. This is required as my modem seizes up if a line is more than 128 characters in length. At the moment I do the searching line by line, by hand.

Don't save it unformatted but print it to a file! Use the printer driver called *plain.prd* - look in the Word reference manual for more details of this.

If *you* have any comments, questions or ideas, feel free to drop me a line. I'm keen to know what worries, pleases, intrigues or irritates you. If you are thinking about it then it probably is of interest to someone else so put pen to paper (or whatever the high tech equivalent is!) and let me know.

Finally, if you are prepared to answer other members' telephone queries directly then please let us know; we would like to extend our help facilities in this way if it is possible.

Chairman's Report 1989/90

Peter Bishop

The year to March 1990 has been one of mixed fortunes for the RM User Group. Our membership has grown, finances are healthy, our informal help system is increasingly active, our relationship with RM is sound, and the User Group server is gaining new software all the time. On the other hand, day meetings have been few, far between and poorly attended, and the Conference, though enjoyable, attracted a smaller attendance than in recent years.

Relations with RM

Relations with RM have continued to benefit from our active contact at senior level through David Hay. David has given a lot of time to the User Group this year, through attendance at a number of committee meetings, and joining us at the conference. He has been of assistance to the group in a number of ways. In addition, his near-namesake, David Jay, has kept the User Group in the minds of all RM users through frequent mentions in RM Update. Colin Watkins continues his active and vocal support role.

RM and the User Group had a difference of opinion over material in one of this year's issues of the magazine. This was, however, thoroughly discussed in committee and resolved to the satisfaction of both parties. The resolution of this issue has, in my view, confirmed the strength of the working relationship we have with RM. The editorial guidelines now in force should ensure that this situation does not arise again in the future.

The Conference

The 1989 Conference was enjoyed by all concerned, though it was a more exclusive gathering that in recent years. The venue - the Penguin Hotel in Daventry - was excellent, as well as being one of a diminishing number of conference hotels still within our budget. For these reasons, we have broken with tradition and decided to hold the 1990 conference at the same venue. Our thanks go to Graham Townsend for organising the 1989 conference, a task which he has undertaken again for this year.

Day Meetings
The only Day Meeting during the year was in Cleveland in May 1989. In spite of a lot of hard work by the host venue, Teeside Polytechnic, only a handful of members attended.
The address by Joe Telford concerning the integration of IT across the curriculum was a rare opportunity to hear one of the leading practitioners in the field, sadly not taken up by many.

Tentative plans for other Day Meeting did not come to fruition, and it was felt that the time and effort involved was more than the expected benefit to users, until a revised method of organising and local publicity for these meetings is worked out.

Helpline
The User Group operates an informal helpline by publishing the telephone numbers of committee members in the magazine. If the committee member can't answer your query, he or she usually knows someone who can. This has has a busy year for the helpline, particularly in continued support for the 8-bit machines, many of which seem set to break records for longevity.

The Future
As I pass on the chair of the User Group, permit me a few observations on the evolution of the group during the four years I have been on the committee. When I joined, I felt the User Group was too close to RM for comfort - committee meetings were held at RM, the membership address was RM, and I felt that the group was trying to involve itself too closely with the affairs of RM. In the interim, we have moved our meeting venue, and no longer use RM as a membership address.
Of more significance is the realisation that it is not for the User Group to attempt to decide what is in the interests of RM, and try to conduct relations with RM accordingly. The User Group is first and foremost a professional self-help group of and for RM users. The image and activities of the group increasingly reflect this professional, independent approach. I think that RM now understands this clearly, and our dealings are conducted on this basis. I hope that the User Group will continue to evolve in this direction.

In conclusion, as I come to the end of my term of office, my best wishes to my colleagues and successors on the committee, to the members of the User Group, and to RM. In particular my thanks go to Robin Davies who comes to the end of his statutory five years as User Group editor. I shall continue to be a member of the group, and attend conferences and meetings when I can.

The 1990 ANNUAL GENERAL MEETING

The AGM of the RM USER GROUP took place at ILECC on Saturday, 17th March 1990 with about 50 members present. The officers gave their reports, concluding that it had been a satisfactory year from the point of view of establishing the group's independent rôle and improving its position financially. The change of editor was expected to precipitate the need for additional equipment to enable all printed material to continue to be produced in-house. Several new disks of software are being prepared for the library, about which there will be an announcement later.

The secretary, treasurer, membership secretary, librarian and advertising manager were returned unopposed and two new committee members, John Williams and Myfanwy Wallace were elected.

The position of Chairman was left vacant for the committee to fill in the most appropriate way and it was also charged with selecting a new editor for the coming year from Mssrs Lawrence Upton and Steve Rochford. Graham Townsend was re-coopted to the committee to continue to run the mobile server.

The meeting decided that the remuneration for the editor should be left unaltered for the coming year.

Peter Bishop was thanked for the work he had done as Chairman for the last four years and Robin Davies for his five years as editor, which had seen so many innovations in the style and production of the magazine. Nb: not journal!

The date of the next week-end conference was announced: 19th-22nd October 1990.

The meeting was informed that a notice of the death of Tim Davey-Winter in a road accident had been observed in another magazine. An obituary is included on page 18 of this issue.

The AGM was followed by talks by Colin Watkins about the latest events at Research Machines and by Roger Whitfield on the future of ILECC.
Sales and Marketing at RM are now divided into two levels to cater better for schools and colleges because their needs are so different. Technical Support will continue to deal with all-comers. A new sales scheme will allow educational establishments to defer payments over 3 or 5 years. This was expected to help schools caught up in National Curriculum changes and LMS at the same time. Upgrade options are expected to be available through the scheme.

The parent/teacher purchase scheme has been a success and will be relaunched later this year taking into account lessons learned.

LAN MANAGER is currently being worked-on to support PC-186, unlike the non-RM version. It could eventually subsume NET 3.

Several upgrade paths are planned to incorporate CD-ROM on a network. It could be attached to the server but would be slow, being read by MS-DOS. A dedicated CD-ROM server would be preferable being much faster using its own operating system.

Two new music stand-alone work stations are imminent, at £2099 and £2399.
A new primary pack is announced (computer + s/w bundle) - £1139

The sale of 286 machines is steadily growing but the 186 is still a very popular station.

Colin answered many awkward questions on products and policy and agreed to raise the question of acknowledgement of orders at RM. It was regretted that current invoice forms were an awkward size for filing.

Colin disclosed the current lead times on the major products - an average of four weeks. It was noted that these figures would be unacceptable to individual purchasers.

ROGER WHITFIELD, Director of ILECC, then informed those present of the current state of affairs. Hammersmith & Fulham have accepted responsibility for it and it will remain in the present premises with the same initials. Unfortunately a few staff have already left because of earlier uncertainties.

ILECC's services are being sold to many other boroughs under three categories: Curriculum Support, Software Development, Maintenance & Technical Support. Most schools are buying into the curriculum service which will guarantee them some INSET days, an advisor day and 20% discount on software. Primary subscriptions are either £300 or £500, and secondary are £650.

Many software prices have had to rise and slightly different licensing arrangements are being offered. ITEM too will continue although its funding through FE has ended and only two of the team remain. The newsletter will continue: the next is not due until July.

Roger was thanked for his talk and for the excellent hospitality and technical assistance we enjoyed at ILECC.

After lunch QUESTION MARK, BOREALIS and DESIGNER were demonstrated and users investigated some of the 'NET-SOFT' provisions with Graham Townsend's help.

TIMEFIT

This new package provides a reliable and flexible answer to the timetabling problem. **TIMEFIT** will **construct** the timetable for a school or college with up to 300 each of staff, courses and rooms. It efficiently handles all kinds of constraints, complex arrangements of setting/grouping etc.

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Tim Davey Winter

Tim Davey-Winter was educated at King Edward VI Grammar School, Stratford-On-Avon, Bristol university and the Open University. He worked as a technician at the National Vegetable Research Station, at Warwick and Oxford Universities, as a part-time tutor for the Open University, and lately in a commercial business programming organisation.

As a small boy he used to 'help' the signalmen in Long Marston box and cadge illegal lifts on the yard shunter. Later his railway interests ranged from full-size to N scale. He often operated club exhibition layouts, many of which he helped to build. His own current project was a computer controlled Spanish system in N scale.

His friendly modesty concealed a tremendous knowledge of railways worldwide, which he gladly shared with anyone needing help. He was an expert car mechanic, and frequently aided friends with 'difficult' cars. Professionally he designed, built and programmed computers for special purposes.

Tim and his artist wife Jean shared a great love of the countryside and especially flowers; at their Oxford home they cared for six beautiful cats. They travelled widely, studying art and of course railways; a trip to Mexico had been due to start recently.

Aged 38, at the height of his creative powers, he was killed in a car crash - a tremendous loss to his family and to his very many personal friends throughout the country.

The above obituary appeared in Railway Modeller *on March 20. We are grateful to them for allowing us to reprint it and to Mr. E.J. Winter, Tim's father, for providing it.*

Tim was a member of the User Group committee from April 1986 to April 1988, working as Secretary for the second year and hosting our meetings in Oxford. We offer our deepest sympathy to his family and friends.

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The Inter-Stellar Classroom

Ellis Delmonte

The policy of Integrated Studies in the primary school came into vogue in the 1960's and seems ill-fated with the new legislation. As subject specific activities and tests become the focus of schooling, as they were a century ago, it is hard to see how a more expressive integrated approach can survive. Is the demise, if it comes about, such a bad thing anyway? For most of my teaching career I would have answered in the negative - English was English, maths was maths, history was history and dubious policies were the responsibility of esoteric committees to whom the class teacher alone had to answer.

Even now I am not a purist convert, but I can at least see, I hope, what is meant by an integrated approach. And to a great extent the computer was the catalyst. It always seemed to me that the computer was a remarkable tool for involving children in a world which they could not only enter, but influence, and that the areas of study which might ensue from such imaginative excursions were limitless. What was lacking, and still is, are primary programs which are rich in content and application, and that make full use of the available hardware potential. I felt there was a lot of repetetive, rather patronising material, but not a lot for older children, and am not altogether certain whether the situation has dramatically altered since.

I tried,therefore, to create my own mini-worlds with two encyclopaedic programs, Voyage to the Stars and Archipelago. Both were intended to offer a resource for a range of ideas, imaginative and factual, and to stimulate more traditional work away from the computer. Obviously in the primary school this method is much more likely to succeed than in the secondary sector where the aims, method and time available are all at odds with curriculum demands.

Voyage to the Stars was used with a class of 9 and 10 year old children in a Tower Hamlets school. One intention, and I realise how peculiar this must sound to hardened secondary staff, was to turn the classroom into a mock-up spaceship. The work involved in doing this would involve a range of specific activities, some planned, some spontaneous. The children themselves decided which were the main features of a spacecraft they needed to imitate. These were Engineering, Navigation, Robotics, Science and Research and Recreation. From my point of view there were other areas I wanted to cover that couldn't logically be represented in such a way, but were nonetheless legitimate offshoots of our work - particularly the arts and expressive subjects.

From a purely academic point of view, these, in very simple outline, were some of the topics covered during the running of the project, which was spread over a term.

MATHS
Measurement of distance, speed, location and time;

SCIENCE
The night sky; heat and light; colour; motion;

TECHNOLOGY
Robotics; rocketry

RESEARCH
Space - past and future

ENGLISH
Fiction; journals; dictionary skills; poetry; drama;

HISTORY
Mythology; famous figures;

CRAFT
Alien landscapes - modelling and painting; puppets; masks;
Thus the door became the Entry Hatch and each area in the classroom a representation of the spaceship. Cupboards were turned into engineering rooms, walls into portholes, the computing area into navigation and my teaching base into a centre for alien studies (no comment).

Each child had their own hand-made journal in which they recorded imaginary exploits and discoveries (composition), and a project file for maintaining reference work on space history and technology. They also had set times to use the computer, only part of which was for 'Voyaging'; space adventure stories were typed on a simple word processor; star patterns were devised with Logo and pictures were created with PaintSpa (Borealis wasn't around then).

Given a rich enough resource, the scope for extended study such as this is endless. Obviously it has to be planned to a great extent, and vital areas coerced into appearing even if they do not fall naturally into place. Given, as the primary curriculum now is, a strict and limited set of attainments, it is hard to see how such free-flowing and exciting work can continue.

Ellis Delmonte can be contacted at Aurora Educational Software, 5 Hawkwood Mount, Springfield, London E5 9EQ.

LUCK OF THE DRAW

Jeff Moon

Once in a while a piece of software comes along that explodes in the imagination like an atomic bomb. A piece of software that is so simple to use and yet so powerful that it is a marvel. I felt this level of excitement when I first saw a Postscript laser output. Now that excitement has returned with Corel Draw.

Corel Draw is a vector based drawing program. Confused before we start? I doubt it, but let's look first at the different types of graphic that a computer can produce.

Bit mapped graphics are the most common, these derive their name from the fact that they are made up from single dots or pixels, each of which represents one bit of computer memory.

Imagine drawing a picture by colouring in the small squares one by one on a piece of graph paper. This then is the principle of bit mapped graphics. Painting programs such as Windows Paint, PC Paintbrush, Gem Paint and a host more, all use this method although they all use different file formats to store the information - a problem in its own right.

Creating a bit mapped image is quick and easy but it does have a number of significant disadvantages. The first and perhaps the most important one is that the image is fixed at the resolution of the device that created it; a picture drawn on a CGA screen stays at that resolution regardless. Worse, however, is the fact that the image is also fixed in its proportions and, unless it has been created at precisely the size you wish to use it, it will distort when manipulated by, let us say, a publishing package.

Object oriented or vector graphics are the other type that can be created on a computer. Here the packages have names like Windows Draw, Gem Draw, Gem Artline, Autocad and of course Corel Draw. Instead of creating the image from a series of dots the data is stored as a set of instructions with each picture element being an individual object. A straight line, for example, would be defined by its start and end co-ordinates and the thickness of the line. This means that the image can be rescaled as required.

In use Corel Draw is delightfully simple. To give some idea of how simple, look at the production of these two pictures.

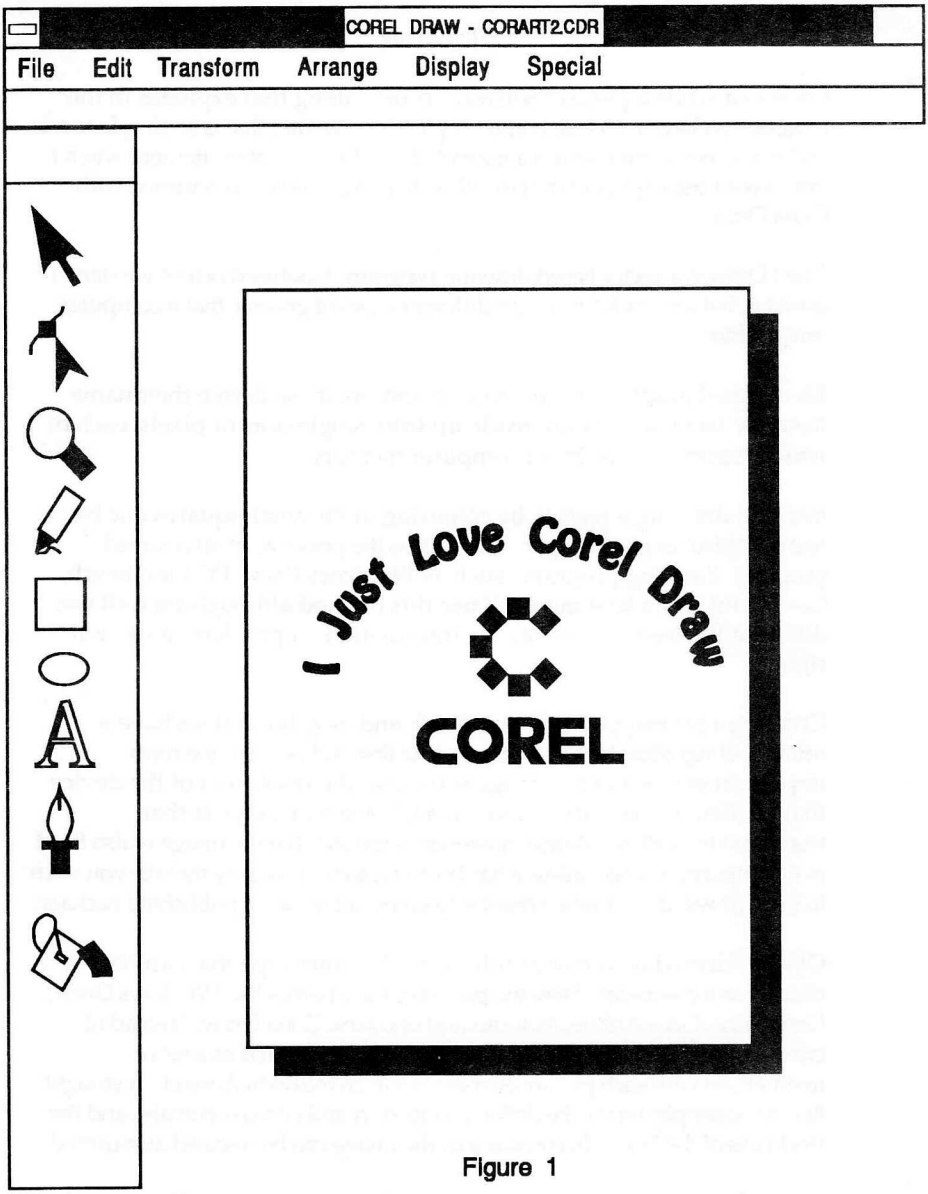

COREL DRAW - CORART2.CDR
File Edit Transform Arrange Display Special
I Just Love Corel Draw
COREL

Figure 1

Figure 2 Figur

Figure 2

Figure 3

The first picture is a design for a button badge. To do this I first selected the Text tool from the bar at the left side of the screen (see figure 1). Positioning it on the work area and clicking with the mouse caused a menu to appear. From this I selected the font and size from the 70 (102 in version 1.1) professional typeface outlines supplied with the package. Once done I clicked on OK. Next I needed to make the text follow a circular path. To do this I selected the circle drawing tool and dragged out an ellipse. If you hold down the CTRL key as you drag then the ellipse will become a perfect circle. At this stage the circle is filled solid black. I obviously needed an invisible circle (?) I chose None from the Fill menu. The next part is the most interesting of all. By using the pointing tool and dragging a box around the text and the circle I selected both objects. After selecting Display from the top bar I chose Fit Text to Path.

A few seconds later and voila, the text had wrapped around the circle. If the text had not fitted exactly. I could have used Undo and then either edited the text or changed the size of the circle and then repeated the fitting process until I had what I wanted. I repeated this process to produce the smile. The eyes are 2 filled circles.

The second picture is quite snazzy but even easier. With this picture I started with a line of text. Then from the Display menu I converted the text to curves. Corel Draw now treats the text as a graphic so that it can be manipulated as a picture.

Once this stage has been completed each letter shape then appears to have lots of small squares along the outline (see figure 4).

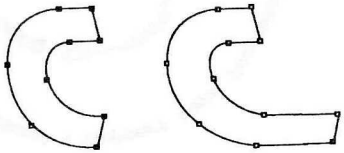


Figure 4

These are in fact Nodes. The second tool down the side bar is the Node manipulator. By using this tool it is possible to pick up a node by clicking on it and then dragging it from its original position to any new desired position. By selecting the two nodes at the end of the curve of the C I was able to elongate it into the final shape as you see it(see fig.4).

In addition, with this same tool, I could have adjusted character, word or line spacing on the screen. I could have Stretched, Skewed, Rotated or Transformed individual letters, words or sentences. It's just a matter of a couple of clicks with the mouse.

If you have any artistic talents then you should love Corel Draw because it can create smooth (bezier) curves. As you draw it adjusts the finer points of your free-hand work. When you are finished Corel lets you make subtle changes and refine each element. The Node manipulator tool allows you to adjust the depth and angle of curves. All that is required is to pick up the tangent markers and drag them to change the curve.

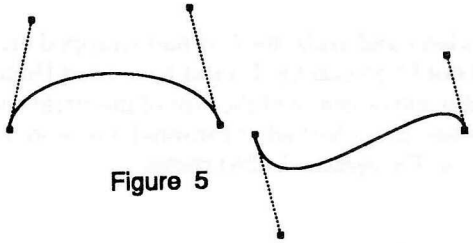


Figure 5

The curve in figure 5 has been altered considerably using this method. It is also possible to adjust the pen nib to produce caligraphic effects. These can be seen using the Preview facility.

If like me your talents are definitely limited; someone once commented that at all I could do was draw breath! Corel Draw can come to your rescue.

With the autotrace feature you can load in a scanned image and convert the bitmaps to vector based artwork. If you are totally hopeless then there is a vast library of 300 clipart images supplied which you can adapt and modify to your own requirements. You can even purchase Corel Draw images for all sorts of purposes.

So far I have only considered black and white images. Generally these are all that is required. This is mainly because the majority of schools will only have black and white printers. However if you want colour output then colour and blending are available in plenty. Corel Draw lets you choose colours from the Pantone Colour Matching System or mix your own. You can blend from one colour to another using fountain fills. Colour separations can be produced together with registration marks.

I mentioned earlier that there are up to 101 typeface outlines available as standard. WFNBOSS a utility supplied with the package allows typefaces to be taken from other programs and converted to a format used by Corel Draw. The most notable program which can supply these extra outlines is ZSoft's Publisher's Typefoundry. With this particular program you can take scanned images of letters and convert them into exact outlines. The number of typeface outlines available by this method is staggering, perhaps into the thousands.

Although Corel Draw will produce output itself to the full resolution of the output device in use I have always considered the measure of a good package to be that it can interface with other programs. On this front Corel Draw has extensive capabilities. It will import TIFF, PCX (true PCX not the files created with the PC Paintbrush supplied with the Network), Lotus PIC and Adobe Illustrator. Version 1.1 will support Windows Clipboard. If you want to communicate with a mainframe then GDF/PIF and CGM formats are supported. Export is in the same format including Windows Metafile and Displayable EPS making it an ideal companion for Pagemaker 3. If this list of formats is not great enough or your favourite package is not there then give Optiks a try. A small package that can import and export virtually every format available on the PC.

Around school Corel Draw has numerous applications. Graphic design is of course top of the list but architectural and technical illustrations, maps, OHP transparencies, screen printing, wall posters (using the tiling feature) and school magazines would all gain from its output. On the more professional side, and with LMS in mind, it is possible to use the package for making promotional items such as mugs, key rings, bags and T-shirts together with brochures, flyers, coupons, posters and presentations. This is not an option I find tasteful but no doubt someone will want to.

Corel Draw runs under Windows 2 (Windows 286) and is compatible with AT's, 386's and PS 2's with DOS 3 or above and at least 640k of ram and a mouse or tablet. Version 1.01 will run on an XT if you have Windows 286 but is very slow.

Corel Draw will run on a standard Network. Unfortunately the CGA type graphics adapter in the 186 stations does not do this program justice. There is only a rough idea of the fine quality of the final product. Working with Corel Draw is best done on a AX or VX machine.

The package sells at varying prices ranging from a reported £240 up to £349 +VAT for version 1.01 to £460 + VAT for version 1.1. Which ever version you choose you will receive a comprehensive manual, a two hour video tutorial, type gauge, clipart library and unlimited hotline support.

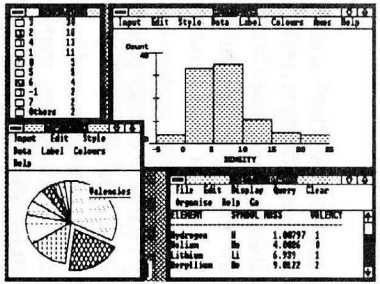
Even in this space I have not explored all the possibilities or features. I think that I could have probably filled this magazine. What more can I say; a truly feature packed package for both the novice or professional alike.

Jeff Moon can be contacted at Castle View School, Cartwright Road, Hylton Castle, Sunderland, Tyne & Wear SR5 3DX.

Rita Davies produced the covers for the last few magazines using Corel Draw and was very impressed with the package. I also liked the package and have ordered it for my school where it will be used in conjunction with PageMaker for producing everything from compliments slips to prospectuses!

Use ORIEL -- The database that exploits the wonders of Windows

What is Oriel?
Oriel consists of an advanced Information Handling (database) system together with a set of graphics utilities all running under MS Windows.



Is Oriel easy to use?
Yes, very easy. It exploits all the features of Windows -- pop up menus, dialog boxes scrolling windows -- and these combined with an English-like interrogation language and context sensitive help to make even complex tasks simple. At the touch of a button or two you can browse freely through the data, ask simple or complex questions, display data in a variety of formats and send it to a printer or disk file. There are even two different environments to choose between when the time comes to enter or edit your own data.

What other facilities does it offer?
Oriel enables you to display data in a number of formats including, pie-charts, bar-charts, histograms, population pyramids, line graphs and scattergrams. The data can either be dynamically transferred from its own Information Handler or, by using the clipboard, obtained from other programs running under Windows.

What does Oriel cost?
Oriel costs £95 for a single user licence but we offer a generous discount for bona fide educational users resulting in a site licence for only ...

£65

The Advisory Unit for Microtechnology in Education
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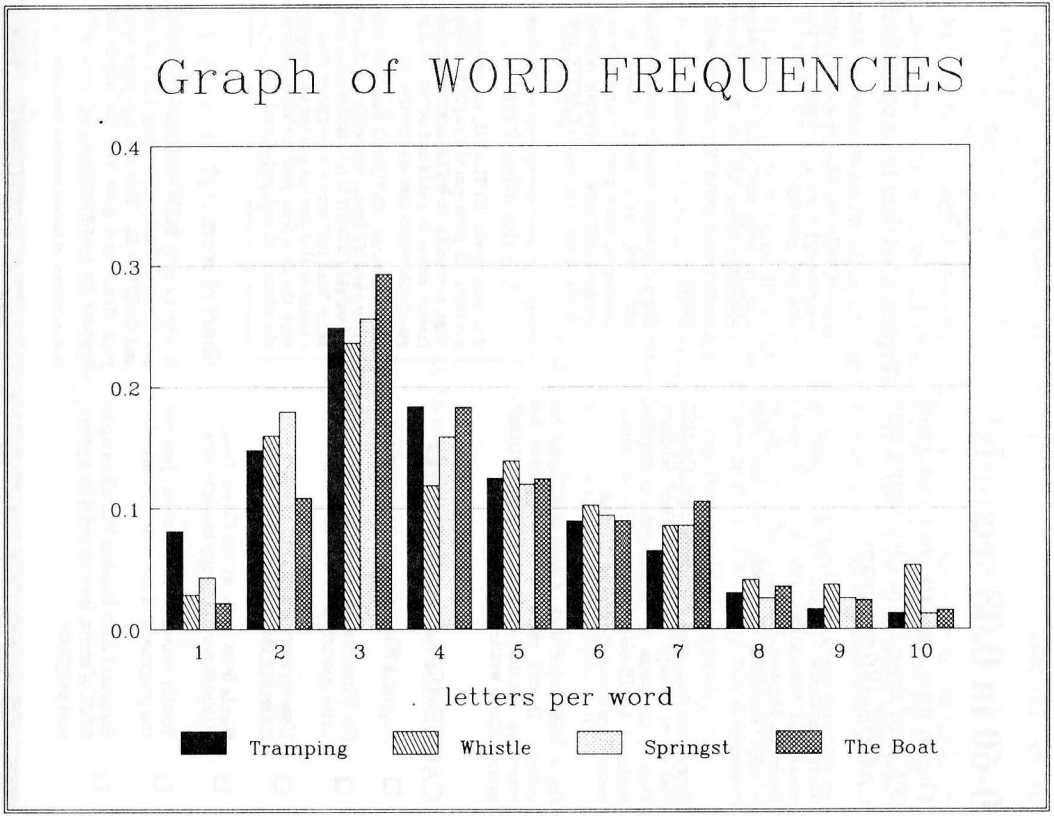
The CANON LBP4 - 'a low cost laser printer'

Ken Maynard

There are currently four or five laser printers (including the Hewlett Packard Laserjet 2P, Mannesman Tally MT905, and Epson GQ5000) on the market aimed at the personal user. The manufacturers seem to think that a small 'footprint' machine (i.e. one which takes up little desk space) selling for half the price of their major model will attract people who, until recently, would have insisted on a 24-pin matrix printer. They are probably right since laser printers have quality, speed and quietness in their favour, but prospective buyers need to think carefully about their requirements and to check what exactly is on offer. Because this is a relatively new market we examine some of these points as well as looking in some detail at one particular machine. A glossary is appended for those new to the jargon.

At between £850 and £999, depending where you buy it, the CANON-LBP4 is far from cheap, so what do you get for your money? Basically, all the features of a top-of-the-range cut-sheet feed matrix printer with almost book-quality.print. To obtain the wonderful world of full page graphics may cost a bit more since the low price is achieved, like those of all its rivals, by offering some fundamentals as 'optional extras'. There are two schools of thought about laser printers. One is that only the best is worth considering, even if it does cost well over £2000, because it should cope with complex graphics and earn its keep by producing lavishly illustrated copy. The other view is that a laser printer will enhance any textual work with no need for extra training and achieve the sort of print quality that is rapidly becoming standard.

The LBP4 is designed for the second situation but is not as far from meeting the first as one might suppose. It is not a postscript[1] printer (although this is a planned option) but does have a built-in page descriptor language (CaPSL) which enables the scaling and rotating of fonts, shading, drawing and positioning of shapes. At present few Canon printer drivers[2] are available to take advantage of this but the Hewlett Packard emulation mentioned below is included.


Graph of WORD FREQUENCIES
0.4
0.3
0.2
0.1
0.0
1
2
3
4
5
6
7
8
9
10
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- ❑ Totally transparent operation - just run the program and use your PC normally
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Typical CACHE-186 applications

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- Use it with our CXM10 exchangeable cartridge drive to get fast Winchester performance with the convenience of a floppy.
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The LBP4 is slow by laser standards at four pages per minute but still much quicker than a matrix printer for full pages. The built-in fonts[3] are extensive, the print quality faultless, the silence is a godsend and it takes up very little room on the desk. The running costs appear to be reasonable but I have not tested the manufacturer's claims about new toner and drum[4] requirements. Surprisingly, most laser printer users find manufacturer's claims to be on the modest side in this respect! The cost per sheet will be similar to that of a photocopier.

The key matter to consider before any purchase is made concerns the software that will be used. The printer will produce whatever text is sent to it in beautiful jet black letters, but more should be demanded than that. Your word processor needs to be able to exploit the machine's impressive range of fonts, together with the usual attributes of bold, italic, underline, etc. In particular, the principal type styles are proportionally spaced, which look good on paper but not all word processors can handle them.

You will want your spreadsheets, data management programs and, especially, your graphics packages to benefit from the added quality purchased so they must have suitable functions built in. Canon can supply a range of drivers for the major, international contenders in all these fields[5] but there is little for the humbler programs that are used by many people. The default font, fixed space 12pt Courier, will be utilised if the machine is given no alternative command. The escape sequences needed to get at the other fonts are listed in the printer's manual but are not for the faint-hearted. In half a day I did manage to produce a WORD-3 driver which will be distributed with Whittle Systems' machines, as will those created by Canon.
Although the LBP4 is not Hewlett Packard compatible, an excellent little TSR[6] program called LASER TWIN is supplied with it that intercepts any HP driver output and converts it to the CANON language. This works perfectly on both the PC-186 with the software IBM emulator, and on RM's other machines. Graphical output from First Choice, for example, looks particularly good. Some laser printers have HP emulation built into them making it very easy to switch modes but disengaging any special features the basic machine may have. LASER TWIN enables Canon's unique qualities still to be used while emulating a more restricted HP Laserjet.

All the lower priced machines have only the minimum of memory and it costs a lot more to upgrade a printer than it does a computer. The supplied 0.5Mb is adequate for most text printing requirements but an extra megabyte is needed for full-page graphical work[7]. The Canon's internal fonts will be quite sufficient for most people: eight scalable and two fixed space, but additional, very full, font cards can be purchased if more variety is needed. The internal fonts will print in both portrait and landscape orientation, which is not true for all makes but is essential since paper can be inserted only one way round. Downloading fonts is feasible but uses a lot of memory.

The basic paper handling is adequate. A few sheets can be stacked on a tray at the front and delivered out of either the front or the top. This tray is the entry point for single sheets: envelopes, transparencies, headed paper, etc. However, the very small 'footprint' is lost if the front paper path is employed. Another extra is a bottom feed tray which holds more paper and, of course, takes no additional desk space.

This printer seems to have all the features required by a lot of individuals and most school offices. It is very easy to use, quick to come up to working temperature and is even light enough to move easily. If one's needs are largely for improved quality of text, then these lower cost lasers are well worth considering although most do not come with the range of fonts that this has. Probably an additional £400 should be added to the price of any of them to obtain a more versatile configuration with extra memory and better paper handling.

For elaborate, full page graphics with exotic fonts and a faster throughput then it is necessary to go up to the next level, a further £1000 at least. Remember also that a dedicated computer, scanner, expensive software, considerable learning and plenty of spare time will be needed to produce professional looking material with it.
The LBP4 has both serial and parallel input, easy to adjust settings, face up or face down delivery, scalable fonts in portrait and landscape orientations. If you are tempted by a different make then make sure it also will run on the PC-186 serial port, if that is what you will use, that it has ample useful fonts and can take single sheet material.

Finally, if you look around for low prices ensure any quotation you get includes toner and drum - CANON distributes the printer without them. Check whether the CANON printer drivers are included and also the 1 year on-site maintenance. And don't forget it will need a cable. The LBP4 is available from Whittle Systems, 53 Besselsleigh Road, Wootton, Abingdon, Oxfordshire, OX13 6DX

GLOSSARY

[1]POSTSCRIPT

This is a programming language, that resides in the printer. Instead of the computer feeding the printer with the pattern of dots that form the picture on the screen it sends a 'program', using a special printer driver, which then re-draws the page on the drum at the highest resolution it can. This is licenced software and, together with the increased memory needed, adds to the cost, but gives excellent results.

[2]PRINTER DRIVER

All printers require some sort of code sequence to make them switch from normal type to bold, underline or italic form. Different makes of printer, on the whole, expect different codes. They almost always begin with 27, the code for the ESC key, and so are also called 'escape sequences'. Word processors adopt some internal system to indicate these special effects but when the time comes to print they have to be translated into whatever codes the printer expects. A 'translation table' is required, different for each printer and unique to the software. This is called a 'printer driver'. Some printers can use other manufacturer's drivers, giving rise to terms like 'Epson compatible' or 'Hewlett Packard emulation' in the advertisements.

[3]FONTS

There are typefaces, sizes, character sets and styles to be considered when printing text. The LBP4 has three typefaces: Courier, Helvetica and Times Roman - although with other names for copyright reasons. Courier is available in just two sizes: 8 point and 12 point. The others are scalable to any size from 1 to 250 points (over 3 inches high). These scalable fonts are also printable in outline, shadow and outline-with-shadow forms making eight distinct fonts in reality. Each has bold, italic and underline styles and most combinations of the three. Nine different character sets are available where in some, for example, the hash (#) gives way to the pound sign (£), and different foreign alphabet sets or graphics characters can be selected. There is also a separate symbol font containing all the Greek letters and an array of other shapes.

[4]TONER and DRUM

A laser printer is basically the same inside as a photocopier but with the picture being drawn on the drum through its connection to a computer rather than via lights, mirrors and lenses. It therefore needs toner and a new drum from time to time just like the ubiquitous copier.

The LBP4 is extremely easy to service in this way, but the need to do so should be very infrequent as it is likely to be used for single copies rather than multiple-sheet runs and few dark, photograph-like, pages will be printed.

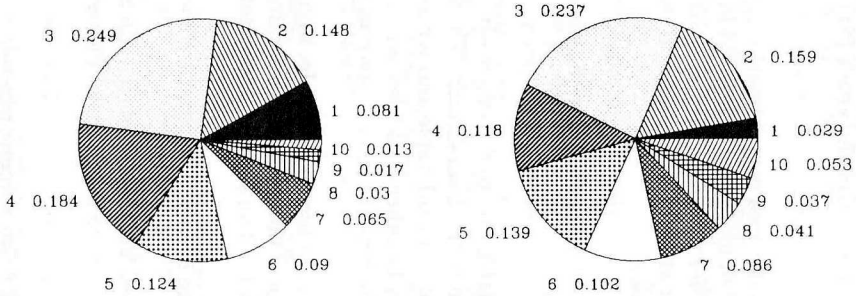
[5]SUPPLIED WITH THE CANON LBP4 by Whittle Systems:
DRIVERS for MS Word 3, 4 & 5, Windows 2, Word Perfect 5, Lotus 123, Symphony 2, Wordstar 5.5, Gem, Displaywrite 4 and a several others. Also LASER TWIN to enable HP drivers to be used.

[6]TSR
'Terminate and stay resident'. This describes a program that is loaded before the main one and appears to do nothing. It simply returns the user to the normal prompt to allow another program to be run. The IBM emulator for the PC-186 is of this type. ILECC's Print-a-Screen is another. LASER TWIN is similarly self-effacing and takes up only 27k.

[7]ADDITIONAL MEMORY
A matrix printer needs only enough memory to retain the contents of a single line before it prints it and collects the next. A page printer has to store a whole page of information which, for a picture, might be several hundred times as much as for a page of print. Thus, the memory size of a laser printer is of vital importance.

Ken Maynard is a deputy head and maths teacher in a secondary school; he strayed into computing in the 60s. On micros he has worked with all RM's machines from the 280z upwards, mainly in assembler, BASIC and Pascal. He has legally versioned many classroom programs, including BBC micro to run on other machines. He uses machines mainly for writing, timetabling and other administrative tasks.

Graph of WORD FREQUENCIES



Nimbus Software Library

Sheila Maynard

Volume 6 of the Software Library is now ready. It contains a set of Census files for the village of Horton. This village changed its county from Buckinghamshire to Berkshire in the last local government reorganisation. The files cover the years 1841 to 1881 in 10 year intervals.

The employment in the area was primarily agricultural and the information may be of use to the historians in your establishment for comparison with other materials they may have. Much useful work can be done on the nature of such data and the conclusions that may and may not be drawn.

There are two versions of each file on the disk, one in Quest format and one in Grass format.

These files are available due to the generosity of a member, Peter Skuse who has given them to the User Group. The work done in their preparation was not inconsiderable and we are grateful to him. I wonder if there may be other data files which are being freely distributed, and which might have a place in the software library.

There are also 2 more volumes available, Volume 7 has a collection of Turbo Pascal Version 3 libraries and programs. Volume 8 is a Demonstration disk for Thinksheet. More details will appear in the next magazine.
(Page 41of this issue carries a review of Thinksheet)

Each Nimbus Library Volume costs £5, with an extra charge of £2.50 if you do not send a formatted 3.5" disk. Please make cheques payable to RMUG.

Sheila Maynard has been a maths teacher, head of computing and is currently running a business education department part time! She is familiar with the full rmage of RM's machines and, in particular, their use in the classroom, standalone and network for a range of school subjects. Used to versioning material of all sorts to cope with new situations.

THINKSHEET from Fisher-Marriott

Ken Maynard

(£60 for s/a, £180 for n/w versions demonstration version available from our software library.)

This is a noteworthy program because it is different from a common word processor or database manager, yet it combines some aspects of each. This uniqueness is not immediately a virtue because teachers will wish to see its potential before purchasing it, but is no handicap in use since that is quite intuitive, making it suitable for pupils of all ages.

THINKSHEET is marketed as a 'thought organiser', which may be true, but whether the structure of one's thinking comes before or after using such a program might be questioned. That is, does the user need a mental image of the links between his or her ideas before committing them to the computer, or does the program really reveal new connections?

THINKSHEET can be used by pupils to enter their own information or they can take advantage of teacher-prepared material. The originator creates 'boxes' anywhere on the screen, with a mouse for preference, and types text into them. Any box may then be 'opened' to reveal, initially, an empty screen which allows further pieces of text to be typed. Each of these may also be 'opened' and the process continued. One mental picture of this framework is of a family tree, but it can be used for far more diverse information and much longer text than just names. Over thirty examples are supplied with the package to awaken people's perception of its potential and material can easily be transfered between THINKSHEET and other programs to make it even more versatile.

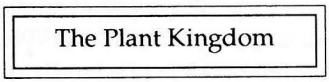
This layered format can instantly be changed to the form of an indented list, with or without numbers. It looks then like a standard outliner - showing another use: to plan or summarise essays and projects. Alternatively it may be shown as continuous text. All the various screen displays can be reproduced on paper and facilities are available to use foreign languages. A word-search feature is included that can be particularly revealing for some sorts of data.

The real value of a program with these aims hinges on the ease with which changes can be made to what has already been entered. It is the juxtaposition of items that draws attention to links between them.

Most operations the user may require can be achieved. It is possible to edit any of the writing but also whole boxes, which are the real units, may be moved, split, joined, duplicated or erased completely.

I have to admit that I have found no personal use for the program, but then I am happy to use an ordinary word processor and to express my thoughts in conventional paragraphs. Although THINKSHEET has some similarity to the hyper-text, -book, -card programs it is rather more limited than them, but easier to understand. With those, selected words can be primed to reveal further information or even to carry out some action. For example, unusual words might be pointed to by the user to uncover their meaning or their purpose in that particular context.

However, I know that some teachers have welcomed THINKSHEET with open arms and have enthused their pupils with a desire to type in a great variety of material. For those that do take it to their hearts I am quite sure there is much to be gained. It would certainly seem to be a program that should be on hand for any pupil who wishes to use it in this age of 'Information Technology with Everything'. A demonstration version is available from the software library which does everything except save and print.; the full version is available from Fisher Marriott, 3 Grove Road, Ansty, Warwickshire, CV7 9JD



The Divisions of the Plant Kingdom:-		
Bacteria	Blue-Green Algae	Brown Flagellate Algae
Euglenoid Algae	Diatoms	Green Algae
Brown Algae	Red Algae	Slime Moulds
* Lichens	* True Fungi	* Bryophytes
*Pteridophytes	* Gymnosperms	* Angiosperms

The Manager's Network.

John Williams

Is part of your job to look-after the RM network in your establishment? Is it not part of your job, but you seem to have ended up doing it anyway? Do you ever ask "Why do they ask me"? Answer "Yes" to any of the above and you have just joined the ranks of RM Network Managers.

Welcome to the club. Firstly I think that I should own up. I am a "Professional Network Manager", that is I am employed as a technician to run the computer facilities in the college and managing the RM network is the major part of the job. In saying that, I am measuring the task in terms of machine population and hours of use derived. If I measure it in terms of my hours of sweat and toil 40 PC1s with 3 servers and 24 480Zs with 2 servers generate far less hassle than the twenty or so Amstrad PCs used around the site, and the sooner the half a dozen remaining Beebs go to the computer graveyard the better.

What has all this to do with managing your network? Well with our new editor's consent I am offering to run a column just for you, the Network Manager, wether you are an enthusiast, or reluctant volunteer. If you have any queries, bits of information, ideas you think may interest others, send them to me, and I will put them together into some sort of readable format. Don't be put off by thinking "they all probably know already." If you didn't know, or have just found out, it's a fair bet that there are others who are still in the dark.

A good example of the sort of information that stands repeating came to light recently. The network manager from a local school had come by to scrounge some information, and was worried by the fact that my users didn't have an AUTOEXEC file in their directory. On a standard network every user has one, all it contains is "CLS+<CR>+<LF>" and those 5 bytes take up at least 2k of disk space because all files are allocated a certain minimum; at least 2k and maybe as much as 8k!. Why are they there? Try deleting one, even for a user who goes straight into MSDOS it makes no difference.

The only explanation I ever got from RM was that they were to prevent TREE.EXE from removing otherwise empty directories. Wait a minute, TREE.EXE has been replaced by RMTREE.EXE which has a /E switch to tell it not to remove empty directories, so you could in theory dispense with these files. The problem is no one told the guy who produced the managers menu, so if you get rid of the AUTOEXEC files you will need to modify MENUMAN.MCD. Find the "Delete all .BAK files" option and modify it to something like :-

```
RMTREE DEL M:\*.BAK /E /Q
```

The important change is putting the /E switch in the command line. This will leave your sub-directories intact, and the /Q speeds it up by not echoing each deletion to the screen. If you only have TREE.EXE speak to RM, the new version has other advantages, for starters it works on X and M series in IBM mode. Another is its ability to copy to multiple disks like BACKUP, but create copies which can be retreived over the network with the COPY command.

The improvements between TREE and RMTREE highlight another topic that might stand some airing. Do you have a tape streamer? How often do you make backups? If just one person lost a vital file would you be prepared to use your last backup? Would you have to wait until the network could be shut down?

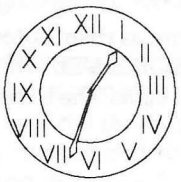
My servers start at 08:00 and switch themselves off at 21:30. If I'm around at either of those times the last thing I want to be doing is making or restoring backup copies. The rest of the time the network is in use and Heaven help me or anyone else who stops it. My answer is to use RMTREE to make those back-ups that I can't persuade someone else to do.

Who do I persuade to make back-ups? Everyone who has files of value. They have the disks, there are enough machines with local drives, if their work is so valuable then they won't want to lose it, and I don't have the time to make back-ups for them, do I! There is another argument in favour of taking personal responsibility for back-ups; should someone be silly enough to wipe the wrong file, they can put it back themselves, without telling the world (or me) what a silly-billy they have been.

If you like the idea of a column for Network Managers, if you want to argue about what I have just said, if you just have a query or plea for help, write in. Send it to me at home, that way it won't get lost amongst the junk mail. If running your network doesn't leave time for writing things down, and you have something you think we all should know, ring me, either at college or at home. You'll find my address and phone numbers inside the back cover.

I'll finish with a plea for myself. Does anyone know of a program which will take a string, ending with a return, and store it as an environment variable? ie. a DOS version of the BASIC "INPUT" statement. It would be so useful in batch files, that I'm sure someone somewhere has already written it.

Somewhere recently I've read that this cannot be done! Unfortunately I can't remember where or why the claim was made. Personally I never believe statements like *cannot be done* so I look forward to receiving the answer! Something else that would be useful in batch files is a way of finding a silicon disc and setting an environment variable to point to it; for example PageMaker will save temporary files on the drive stored in TEMP. I know that there is a program called WHERESD.EXE which will find the silicon disc but it seems a long winded process. (Ed.)



Time to have a cup of tea while I make that backup!

Batch Files

Graham Townsend

I enclose two sample batch files that I have just installed onto the User Group's server. I have written them because I am now adapting the server in order that any RM machine will automatically run a piece of software from my menu (subject of course to Graphics Handling and memory requirements). I will keep comments to a minimum in order to help those who are relatively new to RM networks. The main point to make is that they work.

The use of batch files has an added advantage in that it makes it easy to install new programs (you just put the name of the batch file in the menu and don't have to worry about the path and append bits) and restricts the main reasons for a program not working to a batchfile and the program itself. As batchfiles can be copied and slightly modified for each piece of software we must inevitably reduce the source of any problem still further.

The only lines that need to be used in the RM Menu are:
Name for this function key: Your program name
Pathname for program : P:********.bat
where ******** is your batchfile name up to 8 characters. (The .bat is not really necessarily but it is a useful reference).

Batchfiles can be typed in non-document mode on any word processor or text editor and must have a .BAT extension. (if you are using Word then select Formatted No when you come to Transfer Save; if you are happy with Steed then that works fine).

I have made extensive use of the CHKMODE utility as distributed by RM. CHKMODE returns a number called an ERRORLEVEL which can be used to identify a machine type and its current state. The basic errorlevels are:-

9 Chkmode error
8 Unknown Machine type
7 IBM AT
6 386 in IBM mode
5 286 in IBM mode
4 186 with SETPC loaded
3 386 in RM mode
2 286 in RM mode
1 186 without SETPC loaded ie in normal RM mode

The first Batchfile is for running a BBCBasic program.

```
echo off
rem GPT 16/04/90
set ENVSPC=
set ENVSPC2=
set TEMPCOM=%COMSPEC%
set COMSPEC=
cls
echo Loading the AVP Investigating RadioActive Sources
set mode=rm
chkmode /mode:rm
if $%W%==$1 goto win
if errorlevel==9 goto error
if errorlevel==8 goto unknown
if errorlevel==7 goto ibm
if errorlevel==6 goto prog386
if errorlevel==5 goto prog386
if errorlevel==4 goto progibm
if errorlevel==3 goto prog286
if errorlevel==2 goto prog286
if errorlevel==1 goto prog186
:win
echo Sorry not setup for windows yet
pause
goto exit
:progibm
setpc off
:prog186
path p:\bbcbasic;%dp%
append p:\avp\100com;%da%
p:
cd p:\avp\100com
p:\bbcbasic\bbcload p:avp
cls
goto exit
:prog286
q:
xmode ibm
:prog386
path q:\bbcbasic;%dp%
append p:\avp\100com;%da%
p:
cd p:\avp\100com
q:\bbcbasic\bbcload p:avp
cls
echo Returning to Menu
cd p:\
append %da%
```

```
path %dp%
goto exit
:ibm
echo This is an IBM Compatible
pause
goto exit
:unknown
echo Will not run on this Machine Type
pause
goto exit
:error
echo chkmode error
pause
:exit
chkmode /mode:%mode%
set COMSPEC=%TEMPCOM%
n:\
set TEMPCOM=
cls
```

You will see that the the batchfile has 11 so far unexplained lines. The REM lines are comments which are ignored by the computer.

cls clears the screen.
echo displays the message which follows on the screen
echo off stops the contents of the file being shown on the screen.
SET in the first four lines is simply making memory available for the program to run. They also prevent users accessing COMMAND.COM from within BBC Basic.

set Mode = RM
CHKMODE /mode:RM are 2 lines used for running CHKMODE to find out what type of machine this is.

If $%W%==$1 detects if Windows is running.

The if ERRORLEVEL== lines are fairly obvious, but think of == as meaning greater than or equal to, that is the order is important.

A colon introduces a procedure. If a goto statement is not included at the end of a procedure the next one will be executed automatically.

The :exit procedure is used to finish the batch file and it is jumped to when the program ends but also if you need to get out of the batch file (for example when you try to run BBCBASIC on an unsuitable machine.

In this file you only need to change the boxed lines in order to make any BBCBASIC program run on any RM machine, assuming that it is setup for NIMBUS. The lines that refer to avp/100com are the directory where the program is stored.

The next program allows for a program that sets up files for different screen types. In this case VGA and CGA are used. The program is PCGLOBE and it sets up a datafile called Install.dat. The program is set up in directory PCGLOBE and the program is run to set up the screen datafile. Leave the program and create a new directory below the PCGLOBE directory - I called it 186 - and copy the datafile into it. Repeat for VGA and create a second directory - I used 286. Finally delete the datafile from the PCGLOBE directory. The sub directories are then appended from within the batchfile so that the program can find the datafile. NB PCGLOBE is obviously only for this program and references to PCGLOBE will refer to your directory.
(I have left out the start and end of this file because it is the same as the previous one; the thing to notice is that the machine specific "work" takes place near the labels such as prog386 etc. Ed.)

```
:prog386
xmode ibm
xmode high
q:
mouse
append p:\pcglobe\286;%da%
goto prog
:prog186
setpc ibm /c=0,6,15,14 /l=1 /p
:progibm
append p:\pcglobe\186;%da%
goto prog
... some lines here as before to deal with other machines
:prog
p:
cd \pcglobe
pcglobe
cd p:\
goto exit
```

I hope that the above is useful and would welcome via the magazine any comments on other batchfiles that have proved useful.

RM User Group Conference

The 13th annual conference takes place from Friday 19th October to Monday 22nd October at the Pengun Hotel, Daventry, Northamptonshire.

By the time you read this magazine you should have received your inviation to book for the conference and you will, I hope, be considering going to it. For those of you who are working in education and worried about the cost we would like to point out that you are getting a very full package for your money; the courses are intensive (six hours on each topic) and many delegates in the past have come away convinced that their money has been well spent.

We have tried to aim the course at the needs of our users in education who are getting to grips with the National Curriculum. Several of the courses are suitable for non IT specialists, so if you are a specialist but know of someone who is not but would like to learn some more about the use of IT in their area then please show them the leaflet.

For the first time the Seminars are open to people who cannot attend for the entire weekend. These sessions have always been valuable in the past and in this way we are hoping to make them available to the people who cannot attend for the whole weekend.

If you require further information about any aspect of the conference then please contact:

Helen Williams on	0789-69533 (24 hour answerphone)
or	
Graham Townsend on	0372-66043 (home)
	081- 572 1936 (work)

Micro Mart

Mouse for PC 186. Brand new. (will explain circumstances to highest bidder before his offer is binding). Offers over £25.
RML 380z. Twin drives but no monitor. Offers over £400.
Text books: New copies of Bishop, *Computing Science*, 1st edition. About 20 available. Indicate number required, price offered. No additional charge for postage.

All the above from:
Mr T K Boyd
Seaford College
Petworth
West Sussex
GU28 0NB
Tel: 0243-528427

For the Nimbus PC 186: IBM Utility Board, Firmware upgrade to 1.32F, IBM Mode software. Allows you to run many items of IBM PC software. Full fitting instructions, documentation and original disc. £35 including carriage.
For the Nimbus PC 186: Screen Saver from SPA. A memory resident utility that allows you to save screens within applications and print them later. Full documentation and original disc. £12 including carriage.

All the above from:

Mr J M Turner
340 Clifton Drive North
St Annes-on-Sea
Lancashire
FY8 2PB

Wanted: A Nimbus PC2 computer with 1Mb of memory. Please contact:

Dr D Holden
Department of Physics
University College of London
Gower Street
London
WC1E 6BT
Tel: 071-387 7050 ext. 3271

Price List — Education November 1989

Whittle Systems

For YOUR NIMBUS Expansion

PC186

MEMORY		
R5	512 kbyte Memory Upgrade	£85.95
R10	1024 kbyte Memory Upgrade	£149.95
NetpackR5	16xR5 Memory Upgrade	£1295.00
SupaNetR10	8xR10 Memory Upgrade (includes CACHE186)	£1175.00
Chip1	512 kbyte upgrade, set 16 256k by 1 DRAMS	£67.50
Chip4	512 kbyte upgrade, set 4 256k by 4 DRAMS	£67.50
FLOPPY DRIVES		
CSR200	5.25" DSDD 40 track external floppy drive	£115.00
CSR400	5.25" DSDD 80/40 track switchable floppy drive	£129.00
CSM354	3.5" 720k 2nd floppy drive with psu	£145.00
EXTERNAL WINCHESTERS		
CXM10	10Mb exchangeable cartridge disk drive	£499.00
WS30	30Mb winchester drive	£495.00
WS60H	60Mb winchester drive	£695.00
CRM60H	60Mb high speed fixed winchester drive	£739.00
SCSI	Winchester interface board for NIMBUS PC186	£69.95
TERM	Terminator plug	£9.50
CABLES		
CABDTI	DTI modem cable	£9.95
CABSER	Serial Printer cable	£9.95
CABLPT0	Low cost Parallel Port Printer cable	£9.95
CABWIN	Internal to External Winchester adaptor cable	£25.00
CABFLOP	Internal to External Floppy adaptor cable	£29.95
SOFTWARE		
CACHE186	574 kb floppy & winchester disk cache	£75.00
NVD-III	Local Viewdata package	£125.00
NVD-IIINET	Local Viewdata package, Network version	£295.00
NVD-UTIL	NIMBUS VIEWDATA utilities disk	£75.00

480Z

MEMORY		
480ZSI	Set of 24 64k by 1 DRAMS to upgrade 480Z to 256k	£44.95
480ZSI32	Set of 32 64k by 1 DRAMS Upgrade	£59.95

X-SERIES

EXTERNAL WINCHESTERS		
WSX100	100Mb high speed fixed winchester incl. I/F	£1750.00
WSX144	144Mb high speed fixed winchester incl. I/F	£2145.00
CXM10	10Mb exchangeable cartridge disk drive	£499.00
PC2X	NIMBUS X-SERIES interface for CXM10	£125.00
TERM	Terminator plug	£9.50

MEDIA

Box 10SD	Box of 3 10Mb cartridges for CXM10	£62.50

MODEMS

LINNET12	Pace Linnet 1200 V21, V22, V23	£195.00

NB There is a handling charge of £10.00 to be added to all account orders for less than £50.00. (This does not apply to c.w.o. orders).

All prices exclude P & P and Vat. E. & O.E.

53, Besselsleigh Road,
Wootton,
Abingdon, Oxford OX13 6DX.

Tel (0865) 736488
Fax (0865) 326835

Writing for the Magazine

All contributions are welcomed and most are published, subject to editorial requirements. If you can send the material on disc then please do; I can read any RM discs except 8" and 5.25" high density. I can also read BBC discs but please make sure that the text is saved as plain ASCII. I will return any discs as soon as they have been used.

One of the things the magazine lacks is suitable illustrations. For preference these are disk files which can be transferred into *Aldus PageMaker*. If you have a package such as *Windows Draw!* then this is best but I can cope with most Windows packages. Pictures from *PaintSPA, NewSPAper, Draw Mouse* etc. are also suitable but remember that we are printing in black and white. If you send me the disc file then when it is moved to *PageMaker* all the colours change to black. If you send me a printout of a picture then please use a new ribbon. Black and white photographs are also fine.

If you are preparing your work on a Nimbus then you can help me by using either Word or Windows Write. Select a PostScript printer (it may be shown as APPLASER or LaserWriter) and then set the text to 10 point Palatino. If you use a style sheet then you must include it on the disc with your document file. If you are using a 380z or 480z then I can read WordStar or Oxfordshire Write files.

Please don't be put off by thinking that everyone out there knows more than you; many of our readers are in the same position as you. If you've just solved a little niggling problem then please let us know. Someone else is probable trying to solve the same problem. Equally if you have a problem then write a letter and ask for help. Someone else may just have found the answer. I'd also like to read more items (long or short) on what you do with all the software you've got; how are you teaching spreadsheets, for example.

If you're not sure about whether your idea for an article is any good then please write to me or phone me and I'll try to help.

I would like to let our readers know who the writers are and I have done this in some of the articles. To this end I would appreciate a few words just saying who you are that I can print with your article.

Finally we now pay £5 per printed page of text. All payments are at the Editor's discretion.

Membership Form

Please use capitals

Mr/Mrs/Miss/Ms _____

Job title (if appropriate) _____

Address _____

_____

_____

Postcode _____

I enclose a cheque payable to RMUG ☐ order ☐ for £15 (£20 overseas members). If you are not enclosing a cheque then please enclose an official order, indicating clearly to whom the invoice should be sent.

In order to serve our members better we like to know something about them and what they use their computers to do. The information is confidential and we are registered as Data Users under the Data Protection Act.

Please fill in a number next to the computer names below; the first box is for standalone computers, the second, if present, is for networked machines.

380z	☐	480z	☐ ☐	Nimbus PC186	☐ ☐	Nimbus PC286	☐ ☐
Nimbus PC386			☐ ☐	Nimbus AX	☐ ☐	Nimbus VX	☐ ☐
IBM or compatible			☐	Macintosh	☐	BBC/Master	☐
Other			☐				

Please tick the areas in which you are interested.

Word processing	☐	Spreadsheets	☐	Databases	☐	High level languages	☐
Education	☐	DTP	☐	Art/Graphics	☐	Low level languages	☐
Administration	☐	CAL	☐	CDT	☐	Communications	☐
Other	☐						

Please tick the best description of yourself or your institution.

Sole Trader	☐	Limited Company	☐	Primary School	☐	Charity	☐
Middle School	☐	Secondary School	☐	6th Form College	☐	FE College	☐
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